

Hilton Sydney is recognised as one of the most water efficient of the Hilton Hotels in the Asia Pacific.



Hilton Sydney.



Hilton Sydney's Director of Engineering for Australasia, George Mansour.

After a \$200 million revamp, Sydney's Hilton Hotel is accommodating more guests, serving twice as many meals and hosting more functions. Despite this, the hotel is saving more water.

As part of the revamp, Hilton Sydney installed a full-sized gym and 25 metre swimming pool. The hotel also renovated an adjoining office tower. But Hilton Sydney's water consumption has dropped by about 20 per cent or 100 kilolitres a day, with related energy and cost savings.

While the hotel was revamped, George Mansour, Hilton Sydney's Director of Engineering for Australasia ensured that all equipment, including the new air conditioning system – was chosen on the basis of 20 year life cycle costs, not capital costs alone. The hotel ensures that water and energy costs are considered when making purchasing decisions.

"The company is keen to be seen as environmentally responsible. We have done a lot on water and energy – but we are business minded too – it saves us money," George said.

While Hilton Sydney replaced its old cooling tower, it chose to stay with a water-cooled air conditioning system for its cost effectiveness. Four cooling towers were installed to service the hotel and three for its office building. Variable speed drives were installed. This saves water and energy by enabling the system to ramp up or down depending on demand. The computerised building management system also enables the hotel to vary cooling cycles in guest rooms depending on occupancy and time of day.

Hilton Sydney's pressure reduction program also helps. In the past, water was pumped to a top-floor storage tank and all 24 floors fed by one gravity system. This led to unnecessarily high pressure on lower floors. By dividing the system into two different zones, the hotel has reduced water wastage, pumping and maintenance costs.

Flow regulation devices have been installed in all rooms. Basin taps are limited to six litres a minute, showers to nine litres a minute, and laundry and kitchen taps to 12 litres a minute. Dual flush toilet cisterns have been installed throughout the hotel, including guest rooms.

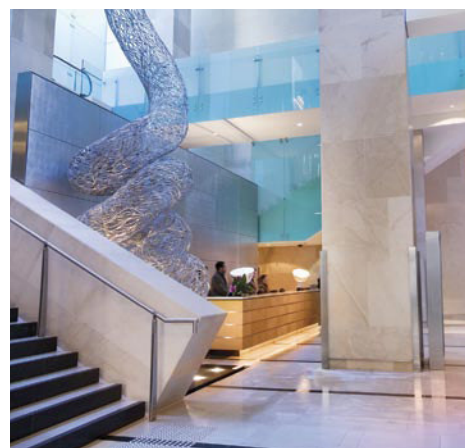
# Saving water

Right: The hotel's laundry is trialling ozone to cut water use.

Far right: With the addition of double glazed and tinted glass to reduce outside heat and noise, energy and water efficient rooms have enhanced guest comfort.

Below right: Hilton Sydney's foyer.

Below: Hilton Sydney's revamp included a 25m indoor swimming pool, open for both hotel guests and the general public to enjoy.



"The company is keen to be seen as environmentally responsible. We have done a lot on water and energy – but we are business minded too – it saves us money..."

Hilton Sydney is aware of the strong links between energy and water efficiency. Improved lighting and thermal efficiency throughout the hotel have cut energy consumption and heat loads – reducing the cooling system load and cutting water consumption in cooling towers. The hotel is also trialling LED lighting instead of halogen down lights to improve energy efficiency and cut heat loads still more.

Double glazed and tinted glass has also been installed to reduce outside heat and noise, and improve guest comfort.

Hilton Sydney's team is still exploring opportunities for further water and energy savings.

The hotel's laundry is trialling ozone to cut water consumption, hot water use and wash cycle times. In the kitchen, the final rinse water from dishwashers and

glasswashers is used in the next pre-wash cycle. Waste heat is used to pre-heat incoming water. Hilton Sydney will also trial new steam traps in the laundry, which should limit steam loss in faulty equipment.

What's more, Hilton Sydney is now enlisting guests in its drive for water and energy efficiency.

Guests are encouraged to reuse towels to reduce the load on the laundry. Guests are also invited to talk about the impact, if any, on their luxury hotel experience.

Hilton Sydney has been a member of Sydney Water's Every Drop Counts (EDC) Business Program since early 2006.

## How monitoring helped

Despite Hilton Sydney's investment in new equipment, monitoring and maintenance still provide the most important water savings. The hotel's cooling towers, hot water makeup, laundry and the office building have all been sub metered.

When water consumption monitoring showed an unexpected jump in water use, an analysis of the sub meters clearly showed a leak in the hot water system.

Regular monitoring and sub metering have helped the hotel save \$3,000 a month in water and sewage charges with more savings in energy bills.

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